

**DETERMINATION OF RADON-222 CONCENTRATION IN
BUILDINGS AT UNIVERSITI TEKNOLOGI MARA, JENGKA,
PAHANG USING SOLID STATE NUCLEAR TRACK DETECTOR
(SSNTD), CR-39**

WAN NUR ADILA BINTI WAN DERAMAN

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ABSTRACT

DETERMINATION OF RADON CONCENTRATION IN BUILDINGS AT UiTM, JENGKA, PAHANG BY USING SOLID STATE NUCLEAR TRACK DETECTOR (SSNTD), CR-39

Assesment for the indoor radon concentration and the annual effective dose in buildings at UiTM, Jengka, Pahang have been done. CR-39 have been used as the detector of Radon. The detectors with diameter of $1\text{ cm} \times 1\text{ cm}$ were distributes at the corner of the buildings with the selected of 16 places. The CR-39 were exposed to radon for 30 days. After retrieved the CR-39, it have undergo the etching process using 6M of sodium hydroxide solution at the temperature of 70°C for 5 hours. Then, the spots of the track of CR-39 were analysed by using the optical microscope. The radon concentration and the annual effective dose were calculated by using the formula. The radon concentration in these locations ranges from 7.42 Bqm^{-3} until 30.12 Bqm^{-3} with an average of $17.11 \pm 6.53\text{ Bqm}^{-3}$ which is below the action limit of ranges $200\text{--}600\text{ Bq/m}^3$ (ICRP, 1993). The ranges of annual effective dose in these buildings were found to be 0.08 mSvy^{-1} until 0.76 mSvy^{-1} with the average values 0.319 mSvy^{-1} which is below the action limit of 3 mSvy^{-1} (ICRP, 1993). Thus, UiTM, Jengka, Pahang is not in radiological risk and the people safe to live there.

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